

REMARKS

In response to the Office Action mailed on March 29, 2004, claims 62 and 68 have been cancelled and claims 56-59, 61, 63, 64, 66, 67 and 69 have been amended. Previously, claims 1-55 have been cancelled and claims 60, 65 and 70 have been withdrawn. Accordingly, claims 56-59, 61, 63, 64, 66, 67 and 69 are currently pending in the application, of which claim 56 is independent.

In view of the following Remarks, Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Drawing Objection

In the Office Action, the drawings were objected to because Fig. 9B has unknown characters. This objection is respectfully traversed.

In this response, Fig. 9B has been amended to correct the informalities, as shown in the attached drawing sheets. Accordingly, Applicants respectfully request withdrawal of the drawing objection.

Double Patenting

Claim 56 stands rejected under the judicially created doctrine of obvious-type double patenting as being unpatentable over claim 1 of U. S. Patent No. 6,657,701. This rejection is respectfully traversed.

In this response, claim 56 has been amended to recite “exposing the sealant to an ultraviolet ray to partially harden the sealant” and “fully hardening the sealant”. It is submitted

that these claimed features are substantially different and unobvious from claim 1 of the U. S. Patent No. 6,657,701. Accordingly, withdrawal of the rejection is respectfully requested.

Rejections Under 35 U.S.C. §102

Claim 56 stands rejected under 35 U.S.C. §102(e) as being anticipated by U. S. Patent No. 6,055,035 issued to Von Gutfeld, *et al.* (“Von Gutfeld”). Applicants respectfully traverse this rejection for at least the following reasons.

Claim 56 recites:

“56. A method for manufacturing liquid crystal displays, comprising the steps of:
forming a spacer on a first substrate or a second substrate;
depositing a sealant on the first substrate;
exposing the sealant to an ultraviolet ray to partially harden the sealant;
depositing liquid crystal on the first substrate;
conjoining the first substrate and the second substrate in a vacuum state; and
fully hardening the sealant.”

In this regard, Von Gutfeld describes “At least one of the two plates ... contains adhesive (e.g., a sealant 41 shown in Fig. 4 ...). The adhesive/sealant is necessary for affixing the two plates 1A, 1B, but *this adhesive remains flexible until a final cure*” (column 7, lines 24-38). As shown in Fig. 7, the final cure is performed during the step 76, which occurs after the step S72 (spraying liquid crystal) and the step S74 (positioning and alignment of plates).

Thus, Von Gutfeld fails to disclose “exposing the sealant to an ultraviolet ray to partially harden the sealant”. Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §102(e) rejection of claim 56.

Rejections Under 35 U.S.C. §103

Claims 57-59, 61-64 and 66-69 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Von Gutfeld in view of U. S. Patent No. 4,647,157 issued to Chiklis (“Chiklis”). Applicants respectfully traverse this rejection for at least the following reasons.

Claims 57-59, 61-64 and 66-69 are dependent from claim 56. As previously mentioned, claim 56 is believed to be patentable over Von Gutfeld. For example, Von Gutfeld fails to disclose or suggest “exposing the sealant to an ultraviolet ray to partially harden the sealant”, as recited in claim 56.

Chiklis is directed to using fluoroelastomeric terpolymer to seal a liquid crystal cell.

Chiklis describes:

“The terpolymer shows resistance to attack by the liquid crystal material. This property allows the cell to be used over *a prolonged period* without softening or other structural impairment of the seal, leaking of liquid crystal material from the cell, or undesirable permeation of air and moisture into the cell through the impaired seal” (column 3, lines 24-30).

The fluoroelastomeric terpolymer sealant is used for the purposes of “*a prolonged period* without degradation”. Example 1 of Chiklis describes how a liquid crystal device having a perimeter seal of fluoroelastomeric terpolymer is prepared. Chiklis describes:

“Adhesive stripes of the sealant solution were applied ... along the edges of a web of a first element ... Stripes of the sealant solution were similarly applied to the edges of a second web ... *The extruded sealant stripes were dried at 66 °C.* Sections were cut ... and were brought into engagement orthogonally so as to define a perimeter of sealant material. Liquid crystal material was applied at the nip of the interfacing web sections ... *Simultaneously with the application of liquid crystal material, the element were sealed*

by a heated laminator (about 20 to 40 seconds at a temperature of 149° to 163° C ... The resulting perimeter seal was not degraded by the liquid crystal material confined thereby and did not undergo softening on storage. Leakage and current characteristics of the cell were not degraded” (column 8, lines 32-63)

Thus, Chiklis merely describes that the extruded sealant stripes are dried at 66° C but fails to disclose or suggest “*exposing the sealant to an ultraviolet ray* to partially harden the sealant”. Since none of the cited references discloses or suggest this claimed step, it is respectfully submitted that claim 56 is patentable over Von Gutfeld and Chiklis. Claims 57-59, 61-64 and 66-69 are dependent from claim 56 and, hence, would be also patentable at least for the same reasons.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claims 57-59, 61-64 and 66-69.

Other Matters

In addition to the amendments mentioned above, claims 56-59, 61, 63, 64, 66, 67 and 69 have been amended for the purposes of informality correction, clarification and better wording. Also, these claims have been amended to be consistent with the amendment made to claim 56.

The specification has been amended to correct an error occurred during the translation.

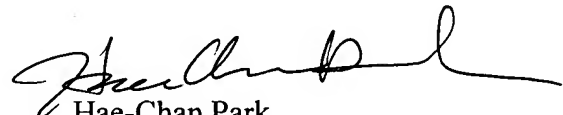
CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submits that all of the stated objections and grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact the Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,



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ATTACHMENT: CORRECTED DRAWINGS